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ORAL SURGERY.

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SOME POINTS IN ORAL SURGERY OF INTEREST TO THE GENERAL PRACTITIONER.

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BY GEORGE L. PARMELE, M.D., D.M.D.

[Presented to the Ninety-Second Annual Meeting of the Connecticut Medical Society, May 23, 1883.]

I should much rather at this time be a silent listener to words of wisdom and instruction from those older in membership in this Society and profession than myself, and consequently better qualified to be one of your essayists at this our ninety-second annual convention; but as you have seen fit to detail me for this task I will not shirk it, as I should be pleased to do, but endeavor to present for your consideration a few ideas concerning the specialty I have adopted, which I hope may not be without interest to you.

Contrary to the prevailing idea, dentistry is not of recent origin. The Egyptians had specialists in every department, and it is claimed that artificial dentures of wood, ivory, and gold have been found in the jaws of mummies. It has also been asserted that fillings of gold have been found in their teeth; but recent investigations by several English dentists of high repute tend to throw discredit on this statement, and they incline to the belief that the teeth were only gilded, as oftentimes were their faces, as a means of decoration. On the other hand, there is the authority of Sir Gardiner Wilkinson, who states that he has seen teeth filled with gold in the mouth of a mummy at Thebes, and the fact that Herodotus mentions the existence of both oculists and dentists as specialists among the ancient Egyptians, makes the statement appear probable.

Hippocrates, 500 B.C., and Aristotle, 350 B. C., wrote largely on the teeth.



Celsus, 100 B. C., recommended the use of the file for removing the sharp edges of carious teeth.

Galen, A. D. 100, treated the subject more extensively than any ancient author.

Ætius, an Arabian, A. D. 300, discovered the apical foramen through which the nerves and vessels enter the dental pulp.

From this time until the latter part of the middle ages, the practice of this specialty, like that of surgery, fell into the hands of mechanics. But about the time of the revival of surgery some advantages toward modern dentistry were made. Among the writers of this period were such men as Fallopius, Eustachius, and Paré. Later came John Hunter, and others of his day. Dentistry in those days consisted mainly in the construction of artificial dentures, and was practiced as an art, by jewelers—as a century or two before rude surgery was performed by barbers.

During the eighteenth century the practice of this art began in America, but it was soon discovered that for the intelligent and successful treatment of the teeth some anatomical knowledge of these organs and the surrounding tissues was necessary, and the better class of those engaged in this calling began the study of their anatomy, physiology, pathology, etc., and some medical men began to engage in the practice.

Societies were organized, journals and text-books published, and about 1839 the first dental college was established. American dentists soon became acknowledged of superior skill the world over. At this time the almost universal remedy for nearly all diseased conditions of the teeth, except simple caries, was the forceps and the substitution of artificial teeth. Now, exposed and inflamed pulps are saved alive; abscessed teeth, atrophied sockets and necrosed jaws, are successfully treated and saved; extraction, except in extreme cases, is considered malpractice.

Dental deformities are corrected; fractures of the maxillae, diseased antra, and all abnormal conditions of the mouth, are considered as coming within the province of a thoroughly educated dental and oral surgeon. Not only this, but by proper prophylactic measures in the young, impairment of these organs is, to a great extent, arrested.

But while scientific dentistry has rapidly advanced, empiricism has not been idle, and it would be impossible to estimate the

amount of injury inflicted by the quacks with which the country abounds.

The Society for the Prevention of Cruelty to Animals protests strongly against vivisections for original investigations; would it not be better employed in waging war against the wholesale extraction and mutilation of the valuable organs under consideration?

The importance of good teeth to mankind is greater than is appreciated by many. Like the eye, ear, tongue, and other special organs, they are designed for a life service, and their preservation contributes valuable service to the human economy, while their premature loss is of serious damage to the whole body.

In a late report of the Odontological Society, of Great Britain, Edward Canton, F. R. S., gives a large number of cases of habitual constipation, with enormous accumulations of faeces in the descending colon and distressing symptoms of all kinds, which were distinctly traceable to absence of, or a diseased condition of the teeth, to such an extent that mastication was not properly performed, and where treatment was without avail, until the masticatory apparatus was put in proper condition, when the constipation was cured. He says: "It is well known that imperfect mastication of food is a common cause of diarrhea, but few medical practitioners appear to be aware that habitual constipation is not unfrequently due to this cause."

"It is, in fact, scarcely possible to exaggerate the importance of proper mastication of the food. It should be reduced by the teeth to a complete pulp, and unless so reduced the digestion is sure to be deranged and general lowering of health will follow. The imperfectly digested mass, which passes through the pylorus, does not take up a proper amount of bile, nature's purgative, and the consequences which I have just been describing follow as a matter of course. I have said that imperfect mastication always causes more or less general impairment of nutrition; this is sometimes very marked; the patient continues for some time thin and weak, and at last falls an easy victim to any illness by which he may be attacked. In women this general low state of nutrition greatly predisposes to barrenness. A young lady was brought to me by her husband; she had been married for some time, but had no family. She was thin, "nervous," had no appetite, suffered from indigestion when she did eat, was restless at night, and had bad

dreams. I asked her if she masticated her food properly, and she answered, "Oh yes;" but, on looking into her mouth, I found that her teeth were very badly decayed. I recommended the supply of molar teeth; they were adopted, the lady got stout and strong, soon became pregnant, and eventually had several children. So marked was the improvement in her health, and so evident the connection between this and the subsequent pregnancies, that when the husband paid me an occasional visit, and I asked after his wife, he used to answer, "Oh, she is quite well, thank you, Mr. Canton, *she does not want any more teeth!*"

Dr. Oliver Wendell Holmes, in a commencement address delivered before the students of the Dental Department of Harvard University, after speaking in his happy strain of the value of the teeth in relation to the beauty of the human countenance, says: "But we must add to this the consideration, that speech is so largely dependent on the perfection of the teeth, that language, we might say, loses a little with every tooth that falls. What can be more painful to witness than the efforts of a hapless friend to bite his consonants out of the alphabet when he is reduced to the condition of the infant, whose boneless gums are unfit for any task but the caressing pressure of the maternal mouthful!" "And then the humbler, but still necessary function of mastication, how much depends upon the ease and perfection with which this is performed! You can tell the state of a village by going to the mill. If it has enough to grind, and grinds it well and cheaply, you will find good farms and well fed people; so if you see a good square jaw, filled with good sound teeth, and moved by a set of muscles that mean business, and do it, you will find in all probability, that they nourish a sound frame in man or woman." The teeth and their surrounding tissues, connected as they are through the fifth pair of nerves with the centers of innervation and the vasomotor system, do undoubtedly, when in an abnormal condition, exert through the ramifications of these nerves a baneful influence through the body. I am continually impressed with the ignorance of the public in regard to this matter of so much value to their general health, that if they could only be made to understand more fully about it, I think they would be saved a great amount of suffering, to say nothing of saving them from bad dental practice, which instead of encouraging the preservation of these useful organs, hasten their destruction and loss. Even physicians are

not as well informed on this subject as they might be, to advantage. As medical colleges are now conducted, medical graduates go forth in as great ignorance of diseases of the teeth as do dental graduates of general disease. Lest you think me opinionated in my views on the subject, let me quote what I heard J. Marion Sims, M.D., say at a meeting of the New York Odontological Society. "As to the effects of diseased teeth upon the general health, I wish medical men generally could be better educated upon that point. We are all familiar with the fact that decayed teeth frequently cause neuralgia; and this is the extent of medical education on this point. They usually do not recognize the fact that, as a general thing, decayed teeth, teeth with inflamed alveolus, with matter exuding from around the teeth, are the means of producing more nervous disorders, more terrible consequences to the general health, than almost any other thing that can happen."

. Some simple knowledge of this subject would enable the medical man to treat them more successfully than he does. It is a matter of regret that medical men generally have so little knowledge of this subject." He related numerous cases to illustrate his views.

At the same meeting Dr. Frank Hamilton expressed similar views.

Samuel Sexton, M.D., Surgeon to the New York Ear Dispensary, in the *American Journal of Medical Science*, says: "The apathy which has always existed on the part of the profession regarding this subject has left the treatment of diseases of the teeth in the hands of men who have occupied themselves almost exclusively with its mechanical department, and who, as a rule, have but little to do with the teeth in a medical aspect. It is greatly to be regretted that a field of such interest has been abandoned by the profession. Many affections of the teeth lead to most grave and intractable diseases of the regions presided over by the sympathetic system, which are often suffered to be long unattended before they are brought under appropriate management. Thus an ear, eye, or throat difficulty may become firmly seated, or a neuralgia, which renders life intolerable, established. When I look back at the operation for the removal of Meckel's ganglion, which I twice witnessed, for the relief of facial neuralgia, it occurs to me that the most simple of remedies could have controlled that disease when it was first induced, as was probable in these instances,

by a carious tooth. I think you will find Dr. Sexton's article well worthy of perusal.

I cite the following case from my own practice—a simple one—as showing long continued unsuccessful treatment of neuralgia of about five years standing, of the trifacial nerve, caused by a periodontal abscess opening into the antrum, and causing severe neuralgia, with the absence of pain in the teeth, which caused the trouble.

Mrs. H., aged 50, was referred to me September, 1881, by Dr. C., for treatment. I found the left superior canine with its crown missing, and the root loose from chronic periodontitis. The bicuspid and first molar were missing, and half an inch above the margin of the gum, at a point formerly occupied by the second bicuspid, a fistulous opening was discovered, which, upon probing, was found to lead to the antrum. Removal of the canine root was followed by a single discharge of pus, and a probe passed into its socket also entered the antrum. Surrounding each of these openings was carious bone, greater in amount, however, at the canine opening where the maxilla was dissolved, for a space half an inch in diameter.

Having thoroughly removed all diseased bone with bone-cutting burs, in the dental engine, I then, by means of a small tube attached to a fountain syringe, allowed about a pint of warm salt water to flow into the antrum at the anterior opening, which made its exit at the posterior opening.

By changing the tube to the posterior opening, I reversed the current, thus insuring thorough cleaning of the sinus. This was followed by an injection of,

R Eucalypti (Sanders' Sons), 3 i.

Iodoformi, gr. x.

Aquæ, 3 j.

M.

Then a tent of candle-wicking saturated with glycerine and eucalyptus, was passed into the antrum at the anterior, and brought out at the posterior opening where the two ends were tied together. A few days later floss silk was substituted for the wicking. This treatment continued a week, when the tent was omitted and the patient being instructed, from that time, kept the parts clean herself. In a month, after a few stimulating injections of

R Zinci Sulphatis, gr. iij.
Plumbi Acetatis, gr. v.
Tincturæ Catechu, gtts. x.
Aquæ, 3 i.

M.,

the parts had regained their normal condition, the neuralgia disappeared, and the openings gradually healed. The fountain syringe for thorough cleansing of the antrum I find very useful. I have never seen its use for this purpose mentioned, nevertheless it may be an old idea, though new to me. It is more easily managed, either by operator or patient, than any other form of syringe. I have always believed that dentistry ought never to have been established as a separate profession, but that any one desiring to practice in any department of medicine should be required to follow a regular medical education, and then to perfect himself in the desired specialty.

I think that a few lectures on dental pathology, introduced into our medical courses, would be of great value to the general practitioner. I desire to ask the coöperation of the medical profession in the preservation of the temporary and deciduous teeth. You come more in contact with the little ones, and have better chances of observing their mouths, and of giving advice to their parents than the dentist.

The deciduous teeth for the most part receive attention only when the sufferings of the child render palliative treatment necessary. Perhaps you are not fully alive to the consequences, direct or indirect, of the premature loss of these organs upon the future health and comfort of the child.

On these teeth to a great degree depends, not only the regularity and usefulness of the permanent set, but the perfection of the whole physical organization. At no other time in life are sound, serviceable teeth more necessary as aids to digestion than during these years of growth and development. It is therefore a sad mistake when temporary teeth are permitted to be prematurely extracted. Serious may be the consequences when days and nights of odontalgic pain are suffered to elapse without mitigation. In fact the health and welfare of the individual may be seriously impaired by a neglect of the treatment which these teeth demand in the majority of cases. Parents have not been educated as to their value, and a great many dentists practically ignore the matter

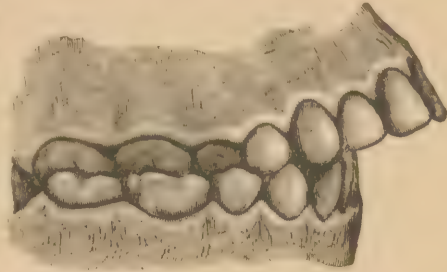
because of the difficulty and tediousness of operations on the teeth of young children, and because these cases do not directly pay pecuniarily.

I would not have you construe what I have said concerning premature extraction of these teeth in meaning that they should never be extracted, for oftentimes the removal of some of them is an absolute necessity, as for example, an alveolar abscess connected with the deciduous tooth not unfrequently results in necrosis of the surrounding bone, involving oftentimes the loss of the germs of several permanent teeth. The following case illustrates this point:

Johnnie F., of Irish parentage, and scrofulous diathesis, about five years of age, was brought to me by his mother, who desired the extraction of the right inferior second molar to relieve pain, which he referred to that tooth. Examination showed the surrounding parts congested and highly offensive, but the tooth complained of was so slightly attacked by caries as to show at a glance that it was not the cause of the trouble. Traction upon it however, showed it, and a portion of the adjoining bone, quite loose and free from the maxilla. After making a slight incision I was able to gently lift out the exfoliated portion (which I pass around for your inspection). It will be observed that the germs of the permanent bicuspid are in the sequestrum, but on examination of the boy's mouth at the present time (it being now about seven years since I first saw him), shows the permanent canine also missing, the germ of which occupied the space where the most acute inflammation seems to have been. Owing to ignorance of the mother the history of the case is rather meager, she not being aware of any trouble until a day or two before consulting me. I am inclined to think, however, that the trouble resulted from a blow which the boy said he received about a year before. The only after-treatment required was thorough cleansing with carbolized water—the parts healing generally.

The whole of the time allotted to me for this essay could to advantage be used on this question alone, but I will tax your patience only long enough to again ask that you use your influence in trying to impress upon parents the necessity of having these teeth carefully and frequently examined by a competent practitioner, for more can be done to *avoid* impairment of the teeth before the age of twelve than at any other time.

While speaking of children, I will simply call your attention to a deformity of the oral and nasal cavities and the adjacent bones, which often seriously impairs mastication and speech, and occasions difficulty in nasal breathing, with its attendant ills. In this deformity, which is produced by the habit in the infant of thumb-sucking,* there is a forward and upward projection of the superior maxilla, accom-



panied by a fan-like projection of the teeth and upper lips. The bones of the floor of the nares are elongated, narrowing the nasal cavity, and generally there is a lateral deviation of the bridge and septum of the nose which causes stenosis, from the thickening of the tissues. In the lower jaw a reversed deformity often exists which deranges the proper articulation of the teeth, interfering with mastication, and consequently impairs digestion. The practice of lip, finger, or tongue sucking may be reckoned under this head, and can cause considerable deformity at an age when the parts are so easily moved and moulded, and whenever any of these pernicious habits have been formed in children, no pains should be spared to break them up. This habit, apparently so innocent, is often encouraged by those ignorant of the consequences, as the peace and quiet given to parents while irritable infants are so engaged is considered especially desirable.

Although a habit hard to correct, even in quite young children, and one which waxes stronger with increased years, to break it up is easier than to remedy the resulting deformity. A night dress without sleeves, fitting tightly about the neck, inside of which the arms can move at will, is one good mode of treatment. A very interesting article on this subject will be found in the *Boston Medical and Surgical Journal*, 1878, by T. H. Chandler, D.M.D.

Physicians and dentists have long observed that during pregnancy the teeth of females are particularly prone to decay. While

*Through the kindness of Norman W. Kingsley, M.D.S., D.D.S., I am allowed the use of this figure (from his work on "Oral Deformities"), which shows a deformity resulting from thumb-sucking.

I have never met with any theory as to the cause of such increase. I am inclined to the opinion that to the abnormal condition of the female pelvic organs, acting through the digestion, together with a vitiated condition of the oral fluids at this time, is due this result.

The same is true, to a great extent, of females suffering from uterine diseases. When such a condition exists, whatever the causes, the treatment should be of a temporary nature, so as to lessen the strain on the nervous system of the patient, and because so-called permanent operations will, while the same predisposing causes exist to produce caries, be found soon to fail. Gutta serena or oxyphosphate of zinc fillings will be found in such cases to outlast any metallic stoppings.

Having often been consulted by medical men as to the advisability of extracting teeth from the mouths of pregnant women, a few words here, on this topic, may not be out of place. While the extraction of a tooth is an operation of common occurrence, it should not be considered as trifling, for it produces invariably a sudden nervous impression—*shock*.

There is a rupture of from one to three square inches of living tissue, containing blood-vessels, and from one to four nerves, while often there is more or less extensive fracture of the bony processes and profuse hemorrhage; and in the case of a pregnant woman, all these things should be borne in mind, together with her previous history and condition.

That which may be endured with impunity by the nervous system at one time, may at another be attended by serious injury and prostration. The condition of the tooth also should be taken into consideration, as to its amenability to temporary treatment for allaying pain incident to it, also to the amount of force required in its extraction, and the consequent shock.

Where a choice has to be made between allowing a tooth to remain, involving odontalgia, severe neuralgia, antral or alveolar abscess (conditions compromising the general health and comfort of the patient), and the removal of the offender, the latter course I should think the proper one to follow, but this contingency can usually be avoided, and does not often arise. It should be a choice between two evils, and especial care should be used to avoid, as far as possible, all nervous impressions. When extraction must be resorted to, I should advise the use of an anæsthetic, preferably

nitrous oxide, there being less danger attending its administration, and because its effects so quickly pass away; and furthermore the operation had better be performed at the home of the patient, especially if she be in delicate health, so as to avoid the nervous irritability which is often awakened by seeing the paraphernalia of the extracting room. I should consider it reprehensible to extract teeth at this time to prepare the mouth for an artificial denture, as the operation should only be performed during pregnancy as a last resort.

As the greater danger of miscarriage exists in the earlier months of pregnancy, temporary treatment, if possible, should then be resorted to, if only for a few weeks. Still, where the tooth is not *easily* amenable to treatment, I believe that the shock from extraction would be less likely to do harm than the exhaustion produced by long continued pain.

In ending, I can truly say that I feel honored with my appointment as an essayist for this occasion, an honor which I desire to acknowledge.

